INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.

2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.

3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288 for each entry on this form.

4. Submittals requiring expeditious handling will be submitted on a separate form.

5. Separate transmittal form will be used for submittals under separate sections of the specifications.

6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".

7. Form is self-transmittal, letter of transmittal is not required.

8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.

9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

A	--	Approved as submitted	E	--	Disapproved (See attached)
B	--	Approved, except as noted on drawings.	F	--	Receipt acknowledged
C	--	Approved, except as noted on drawings. Refer to attached sheet resubmission required.	FX	--	Receipt acknowledged, does not comply as noted with contract requirements
D	--	Will be returned by separate correspondence.	G	--	Other *(Specify)*

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

Reverse of ENG Form 4025

*U.S. Government Printing Office: 1991 — 523-308/40006

SUBMITTAL REGISTER

SPECIFICATION SECTION	
TITLE AND LOCATION	CONTRACTOR / CONTRACT NUMBER

ACTIV-ITY No. a	TRANS-MITTAL No. b	ITEM No. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e thru n	CLASSI-FICATION * o thru q	CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		REMARKS z
						SUBMIT r	APPROVAL NEEDED BY s	MATERIALS NEEDED BY t	CODE u	DATE v	SUBMIT TO GOVERN-MENT w	CODE x	DATE y	
			01310	**SD- 07 Schedules**										
			1.1.	Periodic Schedule Updates	GA									
			1.1.	Initial Project Schedule	GA									
			1.1.	Preliminary Project Schedule	GA									
			01310	**SD- 08 Statements**										
			1.1., 1.2.	Qualifications Of Scheduler	FIO									
			01310	**SD- 09 Reports**										
			1.1.	Narrative Report	FIO									
			1.1.	Schedule Reports	FIO									
			02051	**SD- 01 Data**										
			1.5.	Pollution Insurance	FIO									
			1.5.	Certifications	FIO									
			1.5.	Licenses and Permits	FIO									
			1.5.	Plans	FIO									
			1.5.	Qualifications	FIO									
			02051	**SD- 08 Statements**										
			1.5.	Contractor's Qualification	GA									
			02051	**SD- 18 Records**										
			1.5.	Closure Report	GA									
			02080	**SD- 01 Data**										

* Classification: GA: Government Approved, FIO: For Information Only

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SUBMITTAL REGISTER

SPECIFICATION SECTION

TITLE AND LOCATION

CONTRACTOR

CONTRACT NUMBER

ACTIV-ITY No. a	TRANS-MITTAL No. b	ITEM No. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e thru n	CLASSI-FICATION * o thru q	CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		REMARKS z
						SUBMIT r	APPROVAL NEEDED BY s	MATERIALS NEEDED BY t	CODE u	DATE v	SUBMIT TO GOVERN-MENT w	CODE x	DATE y	
			1.4.	Materials and Equipment	FIO									
			02080	**SD- 04 Drawings**										
			1.4.	Site Layout	GA									
			02080	**SD- 08 Statements**										
			1.4., 1.10.	Medical Requirements	FIO									
			1.4., 1.11.	Training Program	FIO									
			1.4., 1.5.	Qualifications	GA									
			1.4., 2.1.	Encapsulants	GA									
			02080	**SD- 09 Reports**										
			1.4., 1.14.	Licenses, Permits and Notifications	GA									
			1.4., 1.20.	Local Exhaust Ventilation	FIO									
			1.4., 3.9.	Exposure Assessment and Air Monito	GA									
			02080	**SD- 13 Certificates**										
			1.4.	Vacuum, Filtration and Ventilation Equ	FIO									
			02080	**SD- 18 Records**										
			1.4.	Safety and Health Program and Plan	GA									
			1.4.	Project Document	GA									
			1.4., 1.12.	Respiratory Protection Program	GA									
			02091	**SD- 01 Data**										
			1.2.	Equipment List	FIO									

* Classification: GA: Government Approved, FIO: For Information Only

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SUBMITTAL REGISTER

SPECIFICATION SECTION	
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						SUBMIT r	APPROVAL NEEDED BY s	MATERIALS NEEDED BY t	CODE u	DATE v	SUBMIT TO GOVERN-MENT w	CODE x	DATE y	
			02091	**SD- 08 Statements**										
			1.2.	Worker Protection Plan	GA									
			1.2.	Accident Prevention Plan	GA									
			02091	**SD- 09 Reports**										
			1.2.	Sampling Result	FIO									
			02091	**SD- 13 Certificates**										
			1.2.	Quality Assurance	GA									
			15250	**SD- 14 Samples**										
			1.4.	Thermal Insulation Materials	FIO									

* Classification: GA: Government Approved, FIO: For Information Only

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-98-R-0004

SECTION 02300 - ARCHITECTURAL DESIGN REQUIREMENTS

PART
I. - GENERAL

1.1 DESCRIPTION

This project will provide new construction for an addition to, as well as rehab of an existing building at Brooks Air Force Base, San Antonio, Texas. The resulting facility will house administrative offices and a computer room. It will also provide proper space for laboratories, including
Amd #2 Scientific Testing Lab (Textiles Lab, Metalurgical Lab, Dimensional Lab, Chemical Lab and Non-destructive Inspection (NDI or X-Ray Lab, as well as Chiefs offices and toilets)). Additionally, it will provide for Life Sciences Lab and training facilities (which include warehouse areas, secure storage, a photo studio and darkroom, analysis areas, cleaning rooms, a library, a microscopy room, offices, training rooms and toilets. The project consists of remodelling portions of the first floor of an existing two story building (Bldg. 578), a small annex thereto, and constructing an addition to the building. The remodelled spaces are located in the west end of Building 578, as well as the computer room and tape storage vault on the east end.

1.1.1 - Computer Room - Insure the electrical and mechanical connections are facilitated within the existing, raised floor space.

1.1.2 - Tape Storage Vault - Provide power, telephone and data connections for fifteen pre-wired work stations, to be installed by others. Work stations will each house one (1) person and accompanying files and equipment.

1.1.3 - Administrative Offices - Provide space in the west end of Bldg. 578 for sixty-five persons, in pre-wired work stations to be installed by others, as indicated in the floor plan. Allow cubicle office space of 24.2 SM (260 SF) for Lt. Col. and secretary 16.7 SM + 7.4 SM (180 SF + 80 SF), respectively. Also, allow three 9.3 SM (100 SF) cubicle offices for Major/GS/GM-13 managers and 60 cubicle work stations of 7.4 SM (80 SF) each. Power, data and telephone connections shall be routed under floor and up to work stations. Existing stud and CMU walls must be demolished to effect the work described herein. However, no structural elements, such as columns, fire proofing, etc. shall be
Amd #2 affected. NOTE: The existing floor covering in this area is direct glued carpet tiles over vinyl tiles, on concrete slab, as noted in the environmental section of this RFP. Address repairing all damage to non-afffected elements.

Amd #2 1.1.3.1 - Furniture and pre-wired work stations for Tape Storage Vault and Administrative Offices shall be designed by AE Contractor, using standard product lay outs, in accordance with user determined needs, within established furniture budgetary constraints and in accordance with General Services Administration (GSA) requirements. Contractor shall give right of first refusal for work of providing furniture and pre-wired work stations from U. S. Department of Justice, UNICOR Federal Prison Industries.

Sufficient time shall be allowed for UNICOR to review the design, to determine its capability to provide what is required in accordance with

the design. After reviewing the design, UNICOR will determine its capability to provide. If capable of providing the requirements, UNICOR will be the sub contractor for the CID package. If, and only if UNICOR is not able to provide, contractor shall provide CID package from another source, after obtaining a written waiver from UNICOR.

AMD #3

NOTE: Refer to Attachment Section for descriptions of work stations.

1.1.4 - Existing Latrines - The latrines (Men's and Women's) adjacent to the air handler room at the west end, shall be demolished and remodelled to allow for compliance with Americans with Disabilities Act (ADA) and Uniform Federal Accessability Standards (UFAS). This will also require demolition of the small conference room next door to the Mens Latrine. A janitor's closet will replace that room.

1.1.5 - Mechanical, Electrical and Communications Rooms - Provide rooms with areas of 46 sm (500 sf), 9 sm (100 sf) and 7.4 sm (80 sf), respectively. Provide appropriate room for electrical equipment and monitoring/communication devices. Refer to Section 02600 MECHANICAL DESIGN REQUIREMENTS and Section 02800 ELECTRICAL DESIGN REQUIREMENTS.

1.1.6 - Restrooms - Provide public, wheel chair accessible restrooms for men and women, as indicated in the floor plan.

1.1.7 - Vending Areas - provide space for 2 to 3 vending machines, a cabinet for microwave oven and a sink with hot and cold water and a drain, for coffee bar. Provide 110 VAC receptacles in accordance with SECTION 2800. Vending area shall be located as indicated in the floor plan.

Amd #2 1.1.8 - Scientific Testing Lab - Provide roof height throughout this area to allow for a 4.3 M (14)' ceiling height, as required. This lab shall be comprised of four labs, as follows: Textiles Lab, Chemical Lab, NDI Lab and Metallurgy lab. The suspended ceiling height throughout the Scientific Testing Lab shall be 3 M (10') unless otherwise noted. All doors in this area shall have half vision panels, unless otherwise noted.

Amd #2 1.1.8.1 - Textiles Lab - This lab shall be comprised of five rooms, as follows. Provide a ceiling 4.3 M (14') A.F.F., in all five rooms within the Textiles Lab. For specific requirements of each lab refer to the Textiles Laboratory equipment listing and layout, located in the Attachments Section to this RFP.

Amd #2 1.1.8.1.1 - Parachute Room - Area: Approximately 197 SM (2122 SF). This room shall be 30 M (100') long, minimum. Requirements are for a long table, by others. This table will be approximately 24.5 - 26 M (80' - 85') long by .914 M (3') wide. It will be used to lay parachutes out on for folding and packing, etc. Provide a cabinet with countertop, water, sink and drainage ajacent to the short wall work bench. Provide a 1.8 M (6') wide x 2.13 M (7') high double door in one short wall and 1.2 M (3') wide x 2.13 M (7') high single doors into each of the adjoining rooms and into the toilet/ telephone areas at the end of the room. Provide a controlled
Amd #2 environment with temperature of 70 degrees F +/-2 degrees (21.1 degrees C +/- 1.1 degrees with R.H. =65% +/-2%. Secure exterior doors with cypher key pad hardware. Insure architecturally signifant entrance at south door of Parachute room.

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Amd #2 1.1.8.1.2 - Mechanical Testing Room - Area: Approximately 52.1 SM (560 SF), minimum. Provide suspended acoustical tile ceiling at 4.3 M (14') AFF. Provide a 1.83 M wide x 2.13 M high (6'-0" x 7'-0") double door into the Textiles Testing Room.

Amd #2 1.1.8.1.3 - Textiles Testing Room - Area: Approximately 113 SM (1213 SF), minimum. Provide water and sinks with drains along walls and in the middle of the room for the work bench. Provide a safety shower on the wall between Textiles Testing and Mechanical Testing.

Amd #2 1.1.8.1.4 - Storage Room - Area: Approximately 45.4 SM (490 SF). This room shall be 37.2 SM (400 SF), minimum. Provide floor to ceiling shelving units along the longer walls, 0.6M deep, with adjustable shelves.

Amd #2 1.1.8.2 - Metallurgy Lab - Area: Approximately 135 SM (1450 SF). All doors, exterior and interior in this lab shall be 1.2 M wide x 2.1 M high (4' wide x 7' high), single doors, secured by cypher key pad hardware. Each door shall have a half glass, wired glass view panel, unless otherwise noted. Each of the four lab rooms within the metallurgy lab shall be 23.8 SM (256 SF), minimum net (4.9 M x 4.9 M) (16' x 16'). The smallest lab shall be the central hallway/layout room, which shall be minimum 1.83 M wide and shall extend the full length of the two lab rooms.

Amd #2 1.1.8.2.1 - Scanning Electron Microscope (SEM) Room - Area: Approximately 27.9 SM (300 SF) - SEM will be provided by others. This room shall be completely shielded within the cavity of the walls for stray electronic, static electricity and magnetic activity that may disrupt or alter the efficiency of the SEM. Shielding shall reduce magnetic field to 3 micro tesla, max. Provide a reinforced, isolated slab, 0.6 M thick, for the SEM, itself, dampened to reduce vibration to a maximum of 3 microns peak to peak at a sine wave of 5 Hz frequency. Coordinate design and construction of this room with manufacturer's specifications for requirements for location as well as footprint of SEM. Provide water circulator valves to facilitate water transfer between SEM Room and Photo room. Provide air diffusers to insure air flow to eliminate turbulence above 2' above finished floor (A.F.F). Provide a controlled environment
Amd #2 with temperature of 20 degrees C +/- 2.8 degrees C (68 Degrees F +/- 5 Degrees) with R.H. =/<50%. Provide 1.2 M wide x 2.1 M high solid core flush wood door (no view panel).

Amd #2 1.1.8.2.2 - Photo Room - Area: Approximately 27.9 SM (300 SF) - Provide sink with tap water supply and deionized water. Provide silver trap on sink drain. Provide tap water to be recirculated through the SEM Room. Provide 1.2 M wide x 2.1 M high solid core flush wood door (no view panel).

Amd #2 1.1.8.2.3 - Project Layout/Hallway - Area: Approximately 23.2 SM (250 SF) - Provide waterproof 120 VAC, 20A receptacle in floor by work bench.

Amd #2 1.1.8.2.4 - General Lab Layout Room - Area: Approximately 27.9 SM (300 SF) - Provide eyewash, complete with water supply and drain, at the back end of work bench in middle of lab. Provide chemical station hoods with relocatable, articulating vents. Provide natural gas connection at each hood. Provide deionized water supply and tap water supply at sink at cutting and grinding machine. Provide effluent trap for pollutants from used sludge, coolants and etchants.

Amd #2 1.1.8.2.5 - Office/Storage Room - Area: Approximately 27.9 SM (300 SF) Provide sufficient lighting level and 120 VAC, 20A electrical recptacles. Provide telephone jacks and data connections. Insure provision of carpet, broadloom or tiles, for flooring.

Amd #2 1.1.8.3 - Dimensional Lab - Area: Approximately 116 SM (1250 SF) - Provide specially designed slab to address especially heavy loading by portable granite slab equipment measuring tables, the heaviest of which is appproximately 9070 kg (20,000 lbs). Special items of equipment for certain precision measurements are very tall, requiring a 3.78 M (12') high ceiling in that portion of the Dimensional Lab where the items will be located. Provide a controlled environment with positive pressure air flow, and with temperature of 68 degrees F +/- 1 degree F and R.H. of <50%. Provide airlocks at both doors to preclude intrusion of particulate matter. Provide 1.83 M wide x 2.13 M high (6' x 7'), button switch activated, double glass doors at each side of the
Amd #2 exterior airlock and 3' wide x 7' high, button switch activated, glass doors at each side of the Parachute Room side airlock.

Amd #2 1.1.8.4 - Non-Destructive Inspection (NDI) Lab - Area: Approximately 61.4 SM (660 SF) - X-Ray equipment will be provided by others. Within the lab shall be a 3.7 M x 3.7 M (12' x 12') X-ray room, which shall be completely lead shielded within the cavity of it's walls.

Amd #2 1.1.8.5 - Chemical Lab - Area: Approximately 48.6 SM (523 SF). Provide controlled environment to include temperature of 22.8 degrees C +/- 2.8 degrees C (73 degrees F +/- 5 degrees F) with R. H. = 50% +/- 10%. Provide lighting and nine 110 VAC and four 220 VAC receptacles along walls, to provide power for lab equipment. Provide four data connections and two telephone jacks on walls. Provide access to compressed air, two locations. Provide natural gas connection and s ink with hot/cold tap water and drainage in work bench adjacent to Lab Chief's office. Provide fume vent to exhaust fumes from optical emersion spectrometer.

Amd #2 1.1.8.6 - Scientific Testing Laboratory Chief's Office - Area: 11.1 SM (120 SF). Provide two data connections and two telephone jacks, one with FAX capability, on walls. Provide four 110 VAC receptacles.

Amd #2 1.1.8.7 - Toilets - Area: Approximately 9 SM (97.5 SF). Insure easily maintainable surfaces, as identified in Para 5.8.

Amd #2 1.1.9 - Life Sciences Lab - Provide a roof to allow for 5.5M (18') ceiling height throughout the Life Sciences Lab. However, unless noted otherwise, ceilings in administrative or office areas shall be at 2.74M (9') AFF; and other spaces shall be open to roof structure. Provide ambient lighting for safety throughout all open spaces. Provide cypher key pad locking hardware for all exterior personnel doors, for security. Provide a button activated buzzer or bell at the overhead door from the loading dock for announcement of arriving loads of materials or equipment. Provide negative air flow ventillation in the areas described by paragraphs 1.1.9.13 through 1.1.9.23, to preclude noxious fumes and offensive odors from migrating to offices and classroom areas of the facility. Provide a 1.5 SM wash rack at the northeast corner of the Life Sciences Lab, with environmentally safe drainage system, including traps, etc. Place rack near ramp at the north of the loading dock, on northeast corner of Life Sciences Lab.

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Amd #2 NOTE: The Life Sciences Equipment Lab is divided into two major sections. The dividing wall runs north and south through what is roughly the middle of the lab. This separates, generally the receiving and storage side from the analysis and training side. Provide a framed opening between the two sides, 2.44 Mwide x 3.66 M high (8' x 12'), closed by strip-curtain, similar to weather proof curtains of clear vinyl strips. This curtain shall provide air separation, to prevent odors from migrating between the two sides of the lab.

1.1.9.1 - S.E. Asian Artifact Analysis Area - Area: Approximately 256 SM (2756 SF). Provide power receptacles, as well as telephone and data
Amd #2 receptacles at each work station. Provide 3.6 M - 4.3 M (12' - 14') high partitions to support storage bins, as indicated in drawings. Insure daylight level balanced lighting within the analysis area.

1.1.9.2 - Korean Mission Area Artifact Analysis Area - Area: For the purpose of design, approximately 228 SM (2454 Sf). Provide power receptacles, as well as telephone and data receptacles at each work
Amd #2 station. Provide 3.6 M - 4.3 M (12' - 14') high partitions to support storage bins, as indicated in drawings. Insure daylight level balanced lighting within the analysis area.

Amd #2 1.1.9.3 - Student/Visitor Briefing Display Area - Area: Approximately 63.2 SM (680 SF). Provide power receptacles. Provide ceiling mounted fluorescent lighting and incandescent highlighting, to provide daylight balanced lighting for the viewing and study of displays located along the wall and elsewhere in the room.

Amd #2 1.1.9.4 - Microscopy Room - Area: Approximately 42 SM (451 SF). Insure balanced lighting in a suspended ceiling within the room.

Amd #2 1.1.9.5 - Classroom/Conference Room - Area: Approximately 108 SM (1163 SF). Provide ceiling mounted fluorescent lighting and incandescent lighting, to insure daylight balanced lighting for the classroom. Provide wall washers and spotlights to highlight speakers and displays. Insure all systems are fully adjustable for lighting levels.

Amd #2 NOTE: Areas described in paragraphs 1.1.9.7 - 1.1.9.12 have daylight balanced lighting in a 2.7 M (9') high suspended ceiling.

Amd #2 1.1.9.6 - Technical Reference Library/Historians Office - Area: Approximately 51.2 SM (551SF). Ceiling height: 3.66M (12' AFF). Provide sufficient light for document research. Provide 110 VAC receptacles along walls and in locations in the floor, centrally located to allow for carrel lighting.

Amd #2 1.1.9.7 - Administrative Area/Office Room - Area: Approximately 40.4 SM (435 SF). Provide 110 VAC receptacles along walls. Provide ambient lighting level sufficient for the use of the room. Provide a minimum of one telephone jack in room. Insure at least one jack has FAX capability.

Amd #2 1.1.9.8 - Senior Lab Photographer's Office - Area: Approximately 9.5 SM (102SF). Provide 110 VAC receptacles along walls. Provide ambient lighting level sufficient for the use of the room. Provide a minimum of one telephone jack in room.

Amd #2 1.1.9.9 - Assistant Lab Photographer's Office - Area: Approximately 9.5 SM (102SF). Provide 110 VAC receptacles along walls. Provide ambient lighting level sufficient for the use of the room. Provide a minimum of one telephone jack in room.

Amd #2 1.1.9.10 - Senior Equipment Analysist's Office/Meeting Area - Area: Approximately 19 SM (204SF). Provide 110 VAC receptacles along walls. Provide ambient lighting level sufficient for the use of the room. Provide a minimum of one telephone jack in room.

Amd #2 1.1.9.11 - Life Science Laboratory Chief's Office - Area: Approximately 51.2 SM (551SF). Provide 110 VAC receptacles along walls. Provide ambient lighting level sufficient for the use of the room. Provide a minimum of one telephone jack in room. NOTE: Insure an architecturally significant entrance at the West entrance of the corridor , just outside Lab Chief's office.

Amd #2 1.1.9.12 - Planning/Family Room - Area: Approximately 19 SM (204SF). Provide 110 VAC receptacles along walls. Provide ambient lighting level sufficient for the use of the room. Provide a minimum of one telephone jack in room.

Amd #2 1.1.9.13 - Bio-Hazardous Cleaning Area - Area: Approximately 16.8 SM (181SF). Insure sufficiently filtered, negative air flow exhaust for the uses of this room.

Amd #2 1.1.9.14 - Explosive Storage Room - Area: Approximately 12.3 SM (132 SF). Ceiling height: 4.88M (16' AFF). Insure compliance with 70SPS/SPAT letter,dated 18 Mar 97, attached to the Requirements and Management Plan (RAMP) for this project. Also, insure compliance with Brooks AFB, US Air Force, US Army Corps of Engineer Fire and Safety Regulations and OSHA regulations. Refer to requirements located in Attachment Section to this RFP. Also, provide a wheelchair accessable personnel door from the exterior dock area to the area adjacent to this
Amd #2 area, to double as a fire exit. Provide walls and roof of this room to contain explosions from a maximum source of 46 kg (100 lbs).

Amd #2 1.9.15 - Heavy Equipment and Cockpit Stand areas - Area:]Approximately 44.1 SM (475 SF). Address requirements for special floor support requirements due to especially high point loads from portable carts carrying heavy loads, that will be parked in this area.

Amd #2 1.1.9.16 - Photographic Studio - Area: Approximately 73.8 SM (794 SF). Insure proper environmental conditions, including temperature, humidity, lighting levels and types of fixtures necessary for photographers to accomplish highly precision work for legal
Amd #2 presentations. To accomplish this, walls shall be extended and sealed to underside of roof deck.

Amd #2 1.1.9.17 - Dark Room - Area: Approximately 37.3 SM (401SF). Ceiling: 2.74M (9' AFF).Address the special darkroom light seal requirements, including the door. Also address darkroom sinks and plumbing, including hot/cold water supply, drains with silver traps, etc. Address light trapped fume exhaust fan with controls.

Amd #2 1.1.9.18 - Photographic Equipment, Film, Chemicals Storage Room - Area: Approximately 18.8 SM (202 SF). Ceiling: 2.74M (9' AFF). Insure

proper environmental conditions, including temperature and humidity necessary for photographic materials to be stored with no deterioration.

Amd #2 1.1.9.19 - Ultra-Sonic Cleaniing Room - Area: Approximately 6.8 SM (73 SF). Provide 220 VAC receptacle, as well as 110 VAC, 20A receptacles. Insure lighting level sufficient to observe cleanliness of processed items. Provide Sink, with hot/cold water supply and drainage.

Amd #2 1.1.9.20 - Deep Sink Room - Area: Approximately 8.2 SM (88 SF). Provide deep sink for cleaning large items, with hot/cold water supply and drainage. Insure lighting level sufficient to observe cleanliness of washed items. Provide 110 VAC, 20A receptacles.

Amd #2 1.1.9.21 - Mishaps Training Area - Area: Approximately 157 SM (1693 SF). Provide 2.7 M (9') high partitions to surround training area, parachute packing area and movable racks, as indicated in drawings. Insure lighting level sufficient to inspect training items in the rooms.

Amd #2 1.1.9.22 - Secure Storage Area - Area: Approximately 93.6 SM (1008 SF) Provide woven wire fabric mesh walls, ceilng and door of sufficient strength to provide legally secure storage for items awaiting court procedures, etc. Walls and ceiling should be 4.3 M (14') high, minmimum.

Amd #2 1.1.9.23 - Mishap Processing Area - Area: Approximately 51.2 SM (551SF). Insure a motor assisted overhead roll-up door from the loading dock to this area.

Amd #2 1.1.10 - Loading Dock, East side of the Facility - Area, for design purposes, 78.2 SM (842 SF); for programming purposes, 39.1 SM (421 SF). Provide a loading dock that is 3M - 3.7 M (10' - 12') wide along the east side of the Life Sciences Lab. Dock shall be sloped to drain away from the building. Provide a ramp near the Northeast corner of the Life Sciences Lab, at the north end of the loading dock, in accordance with ADA/UFAS requirements. This ramp will be used for wheelchair access, as well as for forklift access. Provide a truck well for one "18 Wheeler" type truck to have access to a 1.25 M (4') high dock. Provide a drain at the bottom of the truck well to carry away storm waters. Protect pedestrian traffic from falling accidents by installing a 0.15 M x 0.3 M (6" high x 1') thick curb, with pipe railing installed in accordance with OSHA and AFOSH regulations. The remainder of the dock shall allow pickup access (24" - 30" dock height). Provide commercially available dock bumpers to protect both the truck height high area as well as the pickup height area. Provide a stair, with OSHA and AFOSH approved pipe rails for access to the dock.

Amd #2 1.1.11 - Forklift/wheelchair accessable apron around the Textiles Labs - Provide a 3.7 M (12)' wide concrete apron, sloped away from the building to provide positive sheet drainage of rain water. Apron shall be designed for the loads common to these facilities.

1.2 - DEMOLITION

Amd #2 Demolition of a portion of the South exterior wall of Building 578 and interior walls, as shown in the demolition drawing, as well as interior walls ajacent to this wall will be necessary to accomplish the work of the construction. Demolish the Annex building (approximately 3,000 sf)

to top of existing slab. Demolish all utilities in the Annex to minimum 6" below top of slab. Contractor shall remove electrical conductors from conduits back to panel. Drainage and supply plumbing shall be capped at first joint below top of slab, with holes in the slab filled to top of slab with concrete, finished to match surrounding surface. Any curbs shall be removed to or below top of slab. Slab shall be finished to match surrounding surface.

1.3 - CONSTRUCTION

Amd #2 The type of construction is permanent, Type II N (UBC), sprinklered, non-combustible. The building shall be concrete masonry units (CMU), steel frame as applicable, exterior face brick walls and standing seam metal roof system. Exterior face bricks and mortar shall match, as closely as possible, in texture, size and color, the corresponding surfaces of the existing facility refer to Section 02500 STRUCTURAL DESIGN REQUIREMENTS for foundation and superstructure. Interior partitions shall be CMU or gypsum board on steel studs, as required.

PART II. - CRITERIA REFERENCES

International Conference of Building Officials (ICBO)

ICBO UBC (1994) Uniform Building Code

U.S. Army Corps of Engineers Directorate of Military Programs

CEMP-E (1994) Architectural and Engineering Instructions

U.S. Air Force

HQ AFCESA/DFE (1994) Military Handbook 1008B - Fire Protection for Facilities

National Fire Protection Association (NFPA)

NFPA 101 (1994) Life Safety Code

Brooks Air Force Base, San Antonio, Texas

(1996) Requirements Document

City of San Antonio, Texas

(1996) San Antonio City Code

Brooks Air Force Base, San Antonio, Texas

Base Fire Marshall - Fire Protection Requirements

U.S.Army Corps of Engineers, Southwest Division, Fort Worth District

CEGS Guide Specifications

Brooks Air Force Base, San Antonio, Texas

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-98-R-0004

Architectural Compatibility Plan

Headquarters Air Force Center For Enviromental Excellence

Interior Design Presentation Format (1996)

Department of the Air Force Sign Standards

Air Force Pamphlet 88-40 (1982)

PART III. - DESIGN CRITERIA

3.1 - Exterior Activities: Drive access shall be provided as indicated in the Section 02200 GENERAL CIVIL DESIGN & SITE REQUIREMENTS.

- Sidewalks: Provided around the perimeter of the building for access to parking, and connection to other facilities.

3.2 - Exterior Finishes/Colors: The following items represent a list of government approved colors which shall be used to ensure compatibility with adjacent base surroundings.

Wall Brick: See Section 5.4.3

Roof: See Section 5.6

Window Frames: See Section 5.8.6

Soffits, Major Trim: TBD (To be determined by contractor/designer following Brooks Air Force Base's Architectural Compatibility Standards and closely match the corresponding surface of Bldg. 578.)

Minor Trim: TBD

Wall Paint: TBD

PART IV. - BASIC ANALYSIS

4.1 - Master Plan/Future Expansion: The site was established by Brooks Air Force Base. There are no current plans or requirements for future expansion. Important design parameters were considered to be: site adaptation, spatial organization, circulation, construction techniques, visual design, energy usage, and economy of construction.

4.2 - Visual Features: The design of this facility will provide a permanent, contemporary, aesthetically pleasing facility that will enhance this portion of the Base. The new facilities shall relate to nearby structures.

4.3 - Spatial Composition: The building's mass, exterior appearance, and color selection shall be designed to compliment structures in the area in accordance with Brooks AFB's Architectural Compatibility Plan.

4.4 - Barrier-free Design/Accessibility: The building is to be barrier-free. Every measure should be taken to minimize barriers within the facility.

4.5 - Energy Conservation: The design shall provide a thermally efficient enclosure. The roof and walls of the facility shall be insulated in accordance with below. In addition, the mechanical and electrical systems shall be high efficiency. The facility orientation was dictated by the User. The following building construction U-values shall be required.

4.5.1 Outside Walls: U-factor of 0.10 or less.

4.5.2 Roof/Ceiling Assemblies: U-factor of 0.05 or less.

4.6 - Life Safety:

4.6.1 - References: (latest issues)

4.6.1.1 NFPA-101 - Life Safety Code

4.6.1.2 UBC - Uniform Building Code

4.6.1.3 NFPA-80 - Fire Doors and Windows

4.6.2 - Occupancy: Commercial, Laboratory (UBC)

4.6.3 - Type of Construction: II -N (UBC) with an approved automatic sprinkler system.

4.6.4 - Occupant Load: (NFPA-101 1994 Edition/16-1.7) One person per 18.6 SM of floor area or the maximum amount of actual occupants, whichever is greater. Contractor is responsible for making its own calculations.

4.6.5 - Exit/Egress Requirements - the exit/egress system must fully comply with NFPA 101 - Life Safety Code.:

4.6.5.1 First Floor: 72 x 10 mm/occupant = 720 millimeters required

Corridors 2.44 M wide (typical).

4.6.5.2 This facility must be fully sprinklered in accordance with NFPA 101 and MIL HDBK 1008B.

4.6.6 Fire Extinguishers: Contractor shall install fire extinguishers in recessed cabinets in accordance with NFPA 10 Standard for Portable Fire Extinguishers.

4.6.6.1 Portable fire extinguishers - See Par. 5.10.1.

4.7 - Acoustical Design: Special consideration shall be given to areas where privacy and noise reduction is required. The following is a tabulation of those areas and the minimum STC (sound transmission coefficient) required:

Areas	(STC, MIN)
Between offices	48 (50 mm sound batts, toilets)
Between offices and corridors	48
Between labs and corridors	48

PART V. - BUILDING SYSTEMS, MATERIALS, AND EQUIPMENT

5.1 - General: The primary entrances shall be recessed preferably to a vestibule area.

5.2 - Sitework: Refer to Section 02200 - GENERAL CIVIL DESIGN & SITE REQUIREMENTS.

5.3 - Foundation and Structure: Refer to Section 02500 - STRUCTURAL DESIGN REQUIREMENTS.

5.4 - Walls:

5.4.1 - Laboratories

5.4.1.1 Exterior - Composite wall construction consisting of an outer wythe of brick veneer, air space, rigid insulation board, and dampproofed CMU interior wythe.

5.4.1.2 Interior - Gypsum board on metal studs (CMU at corridors, mechanical and central spine). All interior CMU shall be furred with gypsum wallboard except at normally not occupied spaces like mechanical rooms, communications, electrical & janitor rooms.

5.4.2 - Administration

5.4.2.1 Exterior - Face brick veneer and CMU wall.

5.4.2.2 Interior - CMU interior partitions separating major functions and drywall partitions elsewhere.

Amd #2 5.4.3 Face Brick: Face brick shall match the color of the brick on Bldg. 578 in size, color and texture, and shall conform to ASTM C **2163,** Type FBS.

5.4.4 Concrete Masonry Units: CMU shall conform to ASTM C 90, Type I, Grade N-1 lightweight for hollow load-bearing units OR ASTM C 145, Type 1, Grade N-1 lightweight for bearing units.

Amd #2 5.4.5 Handrails: Handrails shall match in vertical-to-horizontal proportion, color, size and texture, existing handrails on Bldg. 578. Rails shall conform to ASTM A53, for strength and safety factors.

5.4.6 Finish Carpentry: Built-in millwork shall be provided for various areas within the facilities. All casework shall be premium grade oak veneer plywood, stained and finished, custom made to fit space. All countertops, edges, and splashes shall be plastic laminate. All drawers shall have ball bearing drawer side-mounted glides. All doors and drawers shall have pulls with 626 finish.

5.4.7 Bituminous Dampproofing: Dampproofing shall be applied to the exterior side of the CMU wall (exposed to the air cavity).

5.5 Floors: Bituminous waterproofing shall be applied in all parts of slab depressions in toilet areas.

5.6 Roofing: Standing Seam Metal Roof System (SSMRS). Refer to CEGS 07416 for roof system and CEGS 07417 for warranty. Also, refer to SWD-AEIM (Southwestern Division - Architect Engineering Instruction Manual). Brooks AFB prefers a minimal pitch to drains, to be hidden behind a fascia/parapet.

5.7 Doors

5.7.1 Steel Doors: All steel doors and frames shall be minimum 16 gauge, welded construction. All borrow lite frames shall be hollow metal. All interior frames shall be steel. All exterior doors and frames, except as noted as aluminum storefront, shall be steel. All exterior steel doors shall be insulated to a U-value of not more than 0. 19.

5.7.2 Door sizes in the new lab facilities shall be as follows:

Scientific Testing Lab: All doors shall be 1.2 M (4') wide and 2.4 M (8') high except that double doors shall be 1.8 M (6') wide and 2.4 M (8') high. The door to the Lab Chief's office shall be 0.9 M (3') wide by 2.1 M (7') high.

Life Sciences Lab: All double doors shall be 2.4 M (8') wide by 2.4 M (8') high with the exceptions of the exit doors at the north side, into Bldg. 578, the exit doors at the west side, and the doors to the class/conference room, which shall be 1.8 M (6') wide by 2.1 M (7') high. The roll-up door to the dock shall be 3.6 M (12)' wide by 3.6 M (12)' high. The personnel door ajacent to the roll-up door shall be 0.9 M (3') wide by 2.1M (7') high. Interior single leaf doors shall be 0.9 M (3') wide by 2.1 M (7') high. Insure 180 degrees of swing for the doors into Bldg 578, so that the doors lie flat against the wall, when fully open.

5.7.3 Glazing: All exterior glazing shall be 25 mm (1") thick insulating glass; tinted to match exterior glazing of Bldg 578, in color, fenestration
Amd #2 and proportional size (Consider building mass when designing window size). Use tempered glass where required by code, i.e., near doors, etc. Glazing shall receive a butyl hot melt seal in lieu of silicone.

5.7.4 Hardware: To the maximum extent possible, locksets, latchsets, deadlocks, and exit devices shall be the products of a single manufacturer. All door hardware shall be grade 1 meeting the requirements of ANSI/BHMA testing standards. All locksets, latchsets and hinges shall be brass or bronze base metal. Hardware shall be satin chrome (626) finish, except hardware for aluminum storefront doors shall be dark bronze finish, where practicable. All exterior doors shall be fully weatherstripped. All screws and fasteners shall be solid brass in lieu of brass plated where brass plated screws might normally be used. All panic hardware shall be alarmed, refer to Section 02800 ELECTRICAL DESIGN REQUIREMENTS. Hardware finishes shall be similar all through the facility.

5.7.4.1 Locks and Keying: Locksets, exit devices, and keying shall be compatible with Brooks AFB’s "Best" interchangeable cores with six pins to extend the existing base master keying system. Contractor is responsible for coring and keying all locksets as directed by the Government. Contractor shall meet with Government to establish keying schedule. Furnish locks with the manufacturer's standard construction key system. Permanent

cylinders, cores, and keys shall be sent to the Contracting Officer by registered mail or other approved means. Change keys for locks shall be stamped with change number and the inscription "U.S. Property - Do Not Duplicate." Keys shall be supplied as follows:

Locks:	2 change keys each lock.
Master keyed sets:	6 keys each set.
Grand master keys:	6 total.
Construction keys:	6 total.

The keys shall be furnished to the Contracting Officer arranged in a container (key cabinet or portable system (i.e. BHMA/ANSI A156.5 E8351 or E8361)), with expansion room, suitable for key control system storage in sets or subsets as scheduled.

5.7.4.2 Lock and Exit Device Trim: Trim shall be cast, forged, or heavy wrought construction of commercial plain design. In addition to meeting the test requirement of BHMA A156.2 or BHMA A156.13, knobs, lever handles, roses, and escutcheons shall be 1.27 mm thick, if unreinforced. If reinforced, the outer shell shall be 0.89 mm thick and the combined thickness shall be 1.78 mm except that knob shanks shall be 1.52 mm thick. Knob diameter shall be 54 to 57 mm. Lever handles shall be of plain design with ends returned to no more than 10 mm from the door face.

5.7.4.3 Hardware Submittals

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01300 SUBMITTAL PROCEDURES (DURING CONSTRUCTION):

SD-01 Data

Hardware and Accessories; GA.

Manufacturer's descriptive data, technical literature, catalog cuts, and installation instructions. Spare parts data for locksets, exit devices, closers, electric locks, electric strikes, electro-magnetic closer holder release devices, and electric exit devices, after approval of the detail drawings, and not later than 3 month(s) prior to the date of beneficial occupancy. The data shall include a complete list of parts and supplies, with current unit prices and source of supply.

SD-04 Drawings

Hardware Devices; GA.

Detail drawings for hardware devices for computerized keying systems, magnetic cards, keyless push button access control systems, and other electrical hardware devices showing complete wiring and schematic diagrams and other details required to demonstrate proper function of units.

SD-07 Schedules

Hardware Schedule; GA.

Hardware schedule listing all items to be furnished. The schedule shall include for each item: the quantities; manufacturer's name and catalog numbers; the ANSI number specified, sizes; detail information or catalog cuts; finishes; door and frame size and materials; location and hardware set identification cross-references to drawings; ; lock trim material thicknesses; lock trim material evaluation test results; corresponding reference standard type number or function number from manufacturer's catalog if not covered by ANSI or BHMA; and list of abbreviations and template numbers.

Keying Schedule; GA.

Keying schedule developed in accordance with \-DHI-03-\, after the keying meeting with the user.

SD-13 Certificates

Hardware and Accessories; FIO.

The hardware manufacturer's certificates of compliance stating that the supplied material or hardware item meets specified requirements. Each certificate shall be signed by an official authorized to certify in behalf of the product manufacturer and shall identify quantity and date or dates of shipment or delivery to which the certificates apply. A statement that the proposed hardware items appear in BHMA-01, BHMA-02, and BHMA-03 directories of certified products may be submitted in lieu of certificates. Furnish a separate certificate of compliance attesting that hardware items comform to the Section 00700 Contract clauses pertaining to the “Buy American Act.”

SD-14 Samples

Locksets; GA.

Furnish a sample of the locksets and keys to be furnished this project. Notify the Contracting Officer and base personnel for a meeting demonstrating that the locksets to be furnished are fully compatible with the existing keying system. An existing base core, cylinder, and key will be fitted to the sample lockset. The sample key(s) shall be fitted to both the sample lockset and existing locksets. The core and cylinder shall fit the lockset without the use of adaptors and without play. The keys shall easily lock and unlock the locksets without binding or other difficulties. Control key shall easily remove and install cores.

5.8 Interior and Exterior Finishes:

5.8.1 The following are minimum interior finish requirements:

Room Name	Base	Floor	Walls	Ceiling
LAB AREAS	RB	EP	CMU	ACT (unless otherwise noted)

OFFICES	RB	CPT	PGB	ACT
OTHER ADMIN AREAS	RB	CPT	PGB	ACT
LATRINES	RB	CT	CT/PGB	PGB
JAN. CLOSETS	RB	CH	PGB	PGB
VENDING AREAS	RB	RF	PGB	PGB

5.8.2 Abbreviations for ceiling, wall and floor finishes:

CEILING:

ACT - Acoustical Ceiling Tile (medium tex)

PGB - Painted Gyp Board (semigloss finish Throughout)

WALLS:

CMU - Concrete Masonry Units (painted or covered with vwc)
CT - Ceramic Tiles (wainscot and full height in matte or bright glazed finish)

BASE:

CT - Ceramic Tile (use wall or floor tiles)
RB - Resilient Base (rubber or vinyl)

FLOORS:

CT - Ceramic Tiles (unglazed)
CPT - Carpet (wall-to-wall or tiles)
RF - Resilient Flooring (rubber tiles, Vinyl Composition tiles)
EP - Chemical resistant epoxy flooring, consisting of base coat and top coat, with medium grit finish, applied to concrete slab.
CH - Concrete Hardener (smooth concrete floor with medium grit in hardener finish)

Contractor shall be responsible for submitting a "BUILDING COLOR AND FINISH SCHEDULE" in the format as shown in the Interior Design Presentation format guide, as part of the design submittal process at which time color deviations to the interior colors may be required. Section 09000 BUILDING COLOR & FINISH SCHEDULE is provided in this RFP as a guideline only.

5.8.3 Paints shall not contain lead, mercury, or chromates.

5.8.4 Ferrous surfaces that have not been shop coated shall be solvent-cleaned. Surfaces that contain loose rust, loose mill scale, and other foreign substances shall be cleaned by hand tool cleaning in accordance with SSPC SP2. After cleaning, one coat of SSPC Spec No. Paint 25, ferrous metal primer, shall be applied to all ferrous surfaces to receive paint other than asphalt varnish and vinyl paint. The semi-transparent film applied to some pipes and tubing at the mill is not to be considered a shop coat, but shall be overcoated with the specified ferrous-metal primer

prior to application of finish coat. Shop-coated ferrous surfaces shall be protected from corrvsion by treating and touching up corroded areas immediately upon detection.

5.8.5 Paints shall comply with applicable state and local laws enacted to ensure compliance with Federal Clean Air Standards. Materials shall conform to the restrictions of the Texas Air Control Board's Air Pollution Regulation V (31 TAC Chapter 115) for architectural coatings.

5.9 Furnishings

5.9.1 Fire extinguisher cabinets shall be fully recessed . Fire extinguishers shall be included in the contract and shall be 5 gallon, UL type 2A:10B:C. Cabinets shall be factory primed and field painted or factory prefinished . Any cabinet installed in a fire rated wall or partition shall be fire rated accordingly.

5.9.2 Signage: Contractor to use Air Force Sign Standard AFP 88-40 as a guide for exterior and interior signage system.

5.10 Mechanical/Fire Protection: Refer to - Section 02600 - MECHANICAL DESIGN REQUIREMENTS.

5.11 Electrical: Refer to - Section 02800 - ELECTRICAL DESIGN REQUIREMENTS.

PART VI. - ECONOMIC JUSTIFICATION

Constructability, Site Conditions, Long Lead Times: The initial cost of materials and their inherent durability and ease of maintenance should be combined to produce acceptable first cost as well as life-cycle cost effectiveness.

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ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-98-R-0004

WORK STATIONS

Work station "A" (4' X 4')
(53 ea)

ITEMS	SIZE	QUANTITY
Panels	42"-55" h	4 lf
	65"-68" h	8 lf
Work Surfaces	24" d	2 lf
Corner work surface with keyboard cutout	24" w X 36"d	1 ea
Articulating Keyboard Pad		1 ea
Cabinets w/task lights		4 lf
Shelf		0
Mobile Pedestal	6/6/12 Box/box/file	1 ea

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-98-R-0004

Work Station "B" (8' X 9' +/-)
(25 ea)

ITEMS	SIZE	QUANTITY
Panels	42"-55" h	0
	65"-68" h	10 lf
Work Surfaces	24" d	12 lf
Corner work surface with keyboard cutout	48" w X 48"	1 ea
Articulating Keyboard Pad		1 ea
Cabinets w/task lights		5 lf
Shelf		0
Mobile Pedestal	6/6/12 Box/box/file	1 ea
Lateral File (4 Drawer, Free standing)	36"w X 18" d	1 ea

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-98-R-0004

Work Station "C" (10' X 10')
(2 ea)

ITEMS	SIZE	QUANTITY
Panels	9' h	20 lf
Work Surfaces		0 lf
Corner work surface with keyboard cutout		0
Articulating Keyboard Pad		0
Cabinets w/task lights		0
Shelf		0
Mobile Pedestal		0
Lateral File (4 Drawer, Free standing)		0
Tackboard	3' h	4 lf
Door w/vision lite (NOTE: Door is part of panel system)	3' w X 6'-8" h	1 ea

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-98-R-0004

Work Station "D" (12' X 15')
(1 ea)

ITEMS QUANTITY	SIZE	
Panels	9' h	42 lf
Work Surfaces		0 lf
Corner work surface with keyboard cutout		0
Articulating Keyboard Pad		0
Cabinets w/task lights		0
Shelf		0
Mobile Pedestal		0
Lateral File (4 Drawer, Free standing)		0
Tackboard	3' h	4 lf
Door w/vision lite (NOTE: Door is part of panel system)	3' w X 6'-8" h	1 ea

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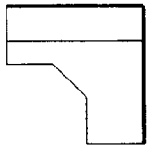

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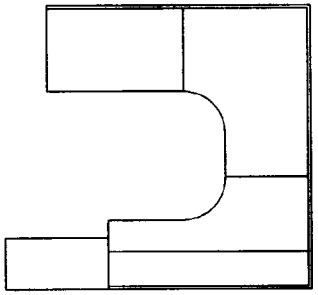
Station "A"
(4' X 4')
(53 EA)



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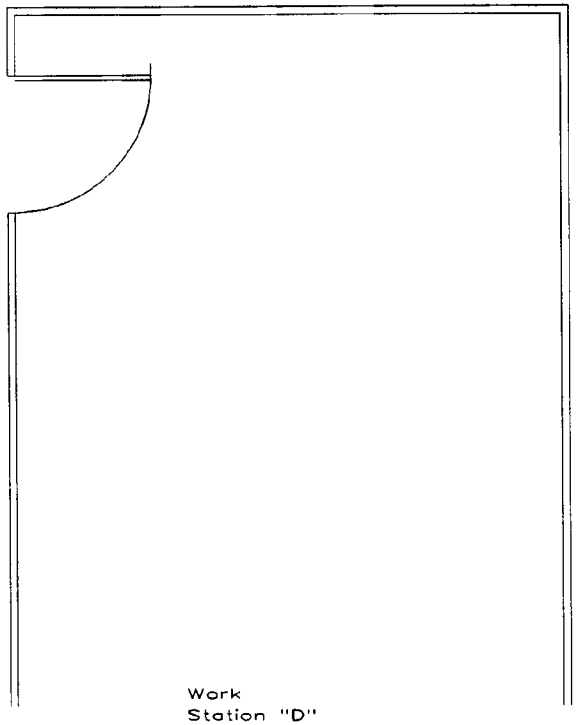
Station "B"
(8' X 9' +/-)
(25 EA)



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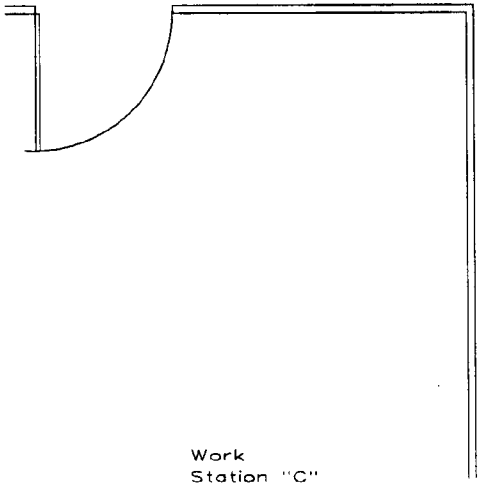
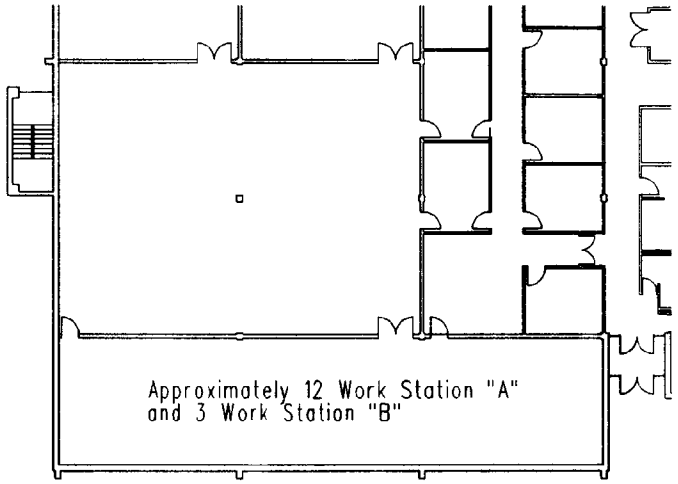
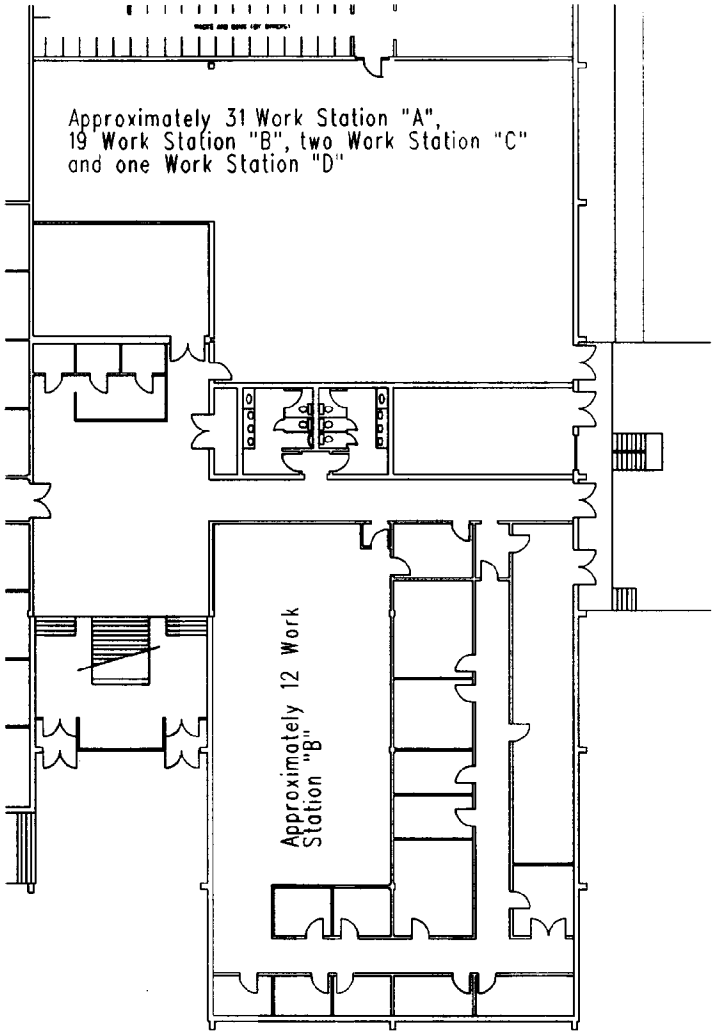
(1 EA)



Work
Station "C"
(10'X10')
(2 EA)


Approximately 12 Work Station "A"
and 3 Work Station "B"


Approximately 31 Work Station "A",
19 Work Station "B", two Work Station "C"
and one Work Station "D"
Approximately 12 Work
Station "B"